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May 7, 2007

Ms. Marlene H. Dortch, Secretary  
Federal Communications Commission  
236 Massachusetts Avenue, NE, Suite 110  
Washington, DC 20002

RE: WC Docket No. 02-60, In the Matter of Rural Health Care Support  
Mechanism; FCC 06-144 Rural Health Care Pilot Program

Holzer Consolidated Health Systems requests to be considered for funding for  
Phase 1 of its health information wide area fiber network expansion program.

**BACKGROUND**

Holzer Consolidated Health Systems (HCHS) is a not-for-profit, 501(c)(3), conglomerate of health care providers located in the Appalachian region of Southeastern Ohio. HCHS consists of: Holzer Medical Center, Holzer Assisted Living – Gallipolis, Holzer Senior Care and the Medical Plaza all located in Gallia County, Ohio and Holzer Medical Center – Jackson, Holzer Family Care Center, Holzer Assisted Living – Jackson, Holzer Dental Health Partners and the Jenkins Clinic all located in Jackson County, Ohio.

Holzer Medical Center (HMC), a not for profit, 199 bed hospital located in Gallipolis, Ohio, offers a full range of hospital services. Among the premier service lines at HMC are the Holzer Cardiovascular Institute; with its 4 Star Rated, cardiac catheterization service, the Comprehensive Weight Loss Center and the Holzer Center for Cancer Care, which is affiliated with the Ohio State University Comprehensive Cancer Center. The hospital also owns a physician office practice which employs three general internal medicine physicians.

Holzer Medical Center – Jackson is a not for profit, 25 bed critical access hospital located in the rural Appalachian region of Southeastern Ohio. Holzer Medical Center – Jackson operates a 20 bed inpatient unit, 4 bed critical care unit, Emergency Department, and Express Care services at its main location. The hospital also owns a dental health practice, pediatrics practice and two separate physician office practices. Employed physicians in these practices include three dentists, one general surgeon, one infectious disease specialist, one endocrinologist, one pediatrician, one doctor of chiropractic and four family practice physicians.

Holzer Assisted Living communities are located in both Gallipolis and Jackson. These facilities provide a comfortable, homelike environment, along with security, independence, privacy, companionship, and physical and social well-being. Holzer Senior Care is a 5 Star Rated, 70 bed skilled nursing facility guided by the vision of quality care and optimum outcome.

Currently the entities of HCHS that are connected utilize T1 technology. As more telemedicine technologies are added to this system the bandwidth required for operations increases and yet the infrastructure does not change. Several new telemedicine projects are planned at HCHS. These projects include increased utilization of teleradiology, expansion of online nursing documentation and barcoded bedside administration of medication and the implementation of an integrated electronic health record including both outpatient and inpatient information.

Holzer Consolidated Health Systems is also pursuing the development of a Regional Health Information Organization along with 14 other healthcare provider organizations located throughout the Southeastern Ohio region. This RHIO is currently functioning as the Appalachian Regional Informatics Consortium – Electronic Data Interchange project and consists of the following investigational partners:

- Adena Health System (Chillicothe, OH)
- Appalachian Rural Health Institute (ARHI) Diabetes/Endocrine Center (Athens, OH)
- Doctors Hospital Nelsonville (Nelsonville, OH)
- Fairfield Medical Center (Lancaster, OH)
- Genesis Healthcare System (Zanesville, OH)
- Hocking Valley Community Hospital (Logan, OH)
- Holzer Medical Center Gallipolis (Gallipolis, OH)
- Holzer Medical Center Jackson (Jackson, OH)
- Marietta Health Care Physicians, Inc. (Marietta, OH)
- Marietta Memorial Hospital (Marietta, OH)
- O'Bleness Memorial Hospital (Athens, OH)
- Southeastern Ohio Regional Medical Center (Cambridge, OH)
- Southern Ohio Medical Center (Portsmouth, OH)

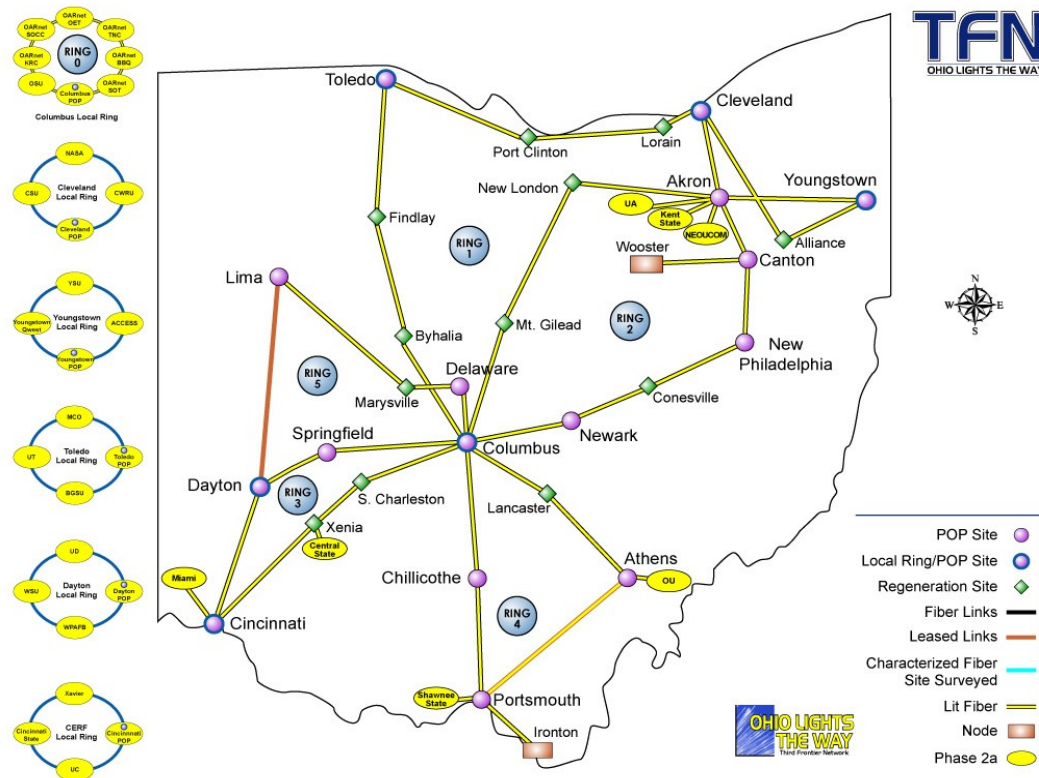
- Mid-Ohio Valley Rural Health Alliance (Parkersburg, WV)

#### Map of RHIO Investigational Partners



Holzer Consolidated Health Systems has designed its network expansion into a 3 phase project. Phase 1, the basis for this request for funding, is to deploy a high speed broadband fiber optic network among the entities within the Holzer Consolidated Health Systems. Phase 2 of the project is defined as linking the HCHS network to the other organizations included in the Southeastern Ohio regional RHIO. This second phase is envisioned to include a link to Ohio's Third Frontier Network, which provides Ohio's link to Internet 2. Phase 3 of the project is to offer and incorporate other physician providers in the local area into our electronic medical record system.

## Map of Ohio's Third Frontier Network



### **FINACIALLY RESPONSIBLE ORGANIZATION**

The Holzer Consolidated Health Systems (HCHS) is the parent organization that is ultimately financially responsible for capital investments for the conglomerate. Holzer Consolidated Health Systems offices are located at 100 Jackson Pike, Gallipolis, OH 45640. Phone 740-446-5000. As such HCHS will be legally and financially responsible for the conduct of the activities supported by this funding opportunity.

### **GOALS AND OBJECTIVES**

Phase 1 of our network expansion project is to replace the current T1 based intra-facility backbone with a dedicated fiber optic network. This conversion is designed to provide for the enhancement of service quality and safety.

With increased quality and safety as primary goals the specific aims of this project are three fold. First the project intends to increase the bandwidth for information among the participating facilities of Holzer Consolidated Health Systems. Next, the project will provide the ability to locate a geographically remote data storage facility away form the primary data center, thus providing disaster recovery and business continuity. Finally the project is designed to

provide a local information backbone for connection into the regional electronic data interchange.

#### Increased Bandwidth

The current data infrastructure between the two hospital sites is being stressed. Reports from one clinical department, which utilizes a server at the other hospital, suggest that the response time for screen updates is often more than 2 seconds. As additional information technology is incorporated into the workflow of this hospital it is anticipated that additional delays in data throughput will occur. These delays in communication can be frustrating to users of the Health Information Systems.

Frustration may lead to underutilization of future clinical information systems. Future plans for this hospital site include the incorporation of barcoded bedside administration of medications, online clinical documentation and a radiology picture archiving and communication system (PACS). Without adequate throughput of information flow, it is anticipated that workarounds of these safety systems will be incorporated by the clinical providers. These workarounds will decrease the effectiveness of the safety systems being put in place and create a higher rather than lower risk environment for the care of our patients.

#### Offsite Data Storage

Personal health data stored by today's information systems provide the basis for critical decision making about the care of patients. This information must be available for care providers when and where they need it regardless of external circumstances. Recent national events have demonstrated the importance of disaster planning for data availability. Holzer Consolidated Health Systems is a key provider of health services in Southeastern Ohio. Providing business continuity within HCHS, in the event of a disaster, will provide an important safety net for the people of Southeastern Ohio and surrounding communities.

Holzer Consolidated Health Systems (HCHS) believes that the redundant storage of data in multiple locations is an important aspect of disaster preparedness. HCHS operates two hospitals in separate counties approximately 30 miles apart. It is anticipated that if a fiber optic network existed between these two facilities redundant storage of data would be possible. While it could be debated whether 30 miles is adequate separation for disaster recovery storage, it is believed that the most probable disaster events which may directly affect one of our facilities would not likely affect the other.

#### Regional Electronic Data Interchange

One final goal and benefit of this Phase 1 project is to create the local infrastructure required for the future expansion into a Regional Health Information Organization (RHIO). Regional efforts are underway, through the leadership of Ohio University along with participants from 14 regional hospitals and health care organization, to investigate the development of a RHIO in southeastern Ohio.

This investigational project is working as the Appalachian Regional Informatics Consortium – Electronic Data Interchange (ARIC-EDI) project.

Phase 2 and Phase 3 of this complete project is anticipated to provide for a connection into Ohio's Third Frontier Network which will allow connectivity with any regionally developed RHIO and finally allow for other local healthcare providers to access this larger infrastructure through connections to this local fiber optic infrastructure.

### **TOTAL ANNUAL COST ESTIMATES**

The current Phase 1 project is anticipated to be complete within one year of receiving funding. Cost estimates for this project are broken down into two major categories. The first set of costs is the current expenses already being provided for by the organizations of Holzer Consolidated Health Systems. The second set of costs is the new expenses for the project. Funding is only requested to support the new expenses for the project.

The current ongoing expenses for the organization includes the salaries, wages and benefits of the personnel currently employed by any entity affiliated with Holzer Consolidated Health Systems who will be working on this project. Also included in this category will be any supplies and other resources not unique to this project which are commonly used in the employee's usual position. All of these expenses will be incorporated into the operating budget of the person's employer.

New expenses for the project include the costs of development and installation of the fiber-optic cable, hardware associated with the fiber optic installation and labor involved for cable installation. This installation and activation cost is estimated to be \$2,000,000 and forms the basis for this request for funding. The ongoing maintenance of this fiber optic network is estimated to be \$80,000 annually and will be absorbed into the operating budgets of the organizations constituting Holzer Consolidated Health Systems.

### **ACCESS BY FOR-PROFIT ORGANIZATIONS**

Phase 1 of the current project will only provide connections for not-for-profit health care providers within the conglomerate of Holzer Consolidated Health Systems. Consequently no plans have been developed for access and support by for-profit providers. Once Phase 3 planning is undertaken then consideration will be made for the utilization of the network by outside entities such as for-profit providers.

### **FINANCIAL SUPPORT NOT FUNDED BY GRANT**

Holzer Consolidated Health Systems is committed to providing the highest quality health care to our patients. The nation's current drive for quality in healthcare is motivating the inclusion of technology and technological advances for all providers. The members of Holzer Consolidated Health Systems are no different.

We are compelled to increase our reliance on technology and to build the infrastructure to support the inclusion of this technology.

With these technology and quality goals in mind, Holzer Consolidated Health Systems is committed to building the infrastructure needed to support our advances. The money from the grant will allow more rapid adoption of health information technologies in our region for our organization. Money for this project is currently planned within the organization. These expenditures, however, are on the long-term plans and not anticipated for the next several years.

Because this grant opportunity allows the more rapid expansion of quality enabling technologies, Holzer Consolidated Health Systems is committed to financially supporting this project in the near term once the grant is awarded.

### **HEALTH CARE FACILITIES INCLUDED IN NETWORK**

Holzer Medical Center  
100 Jackson Pike  
Gallipolis, Ohio 45631  
Phone: 740-446-5000  
RUCA: 5.0

Holzer Medical Center – Jackson  
500 Burlington Road  
Jackson, Ohio 45640  
Phone: 740-288-4625  
RUCA: 7.0

Jenkins Memorial Health Clinic  
140 Jenkins Memorial Road  
Wellston, Ohio 45692  
Phone: 740-384-2167  
RUCA: 7.0

Dental Health Partners  
190 Water Street  
Jackson, Ohio 45640  
Phone: 740-286-0480  
RUCA: 7.0

The Medical Plaza  
936 State Route 160  
Gallipolis, Ohio 45631  
Phone: 740-446-9620  
RUCA: 5.0

Holzer Pediatrics  
102 Twin Oaks Drive  
Jackson, Ohio 45640  
Phone: 740-286-0469  
RUCA: 7.0

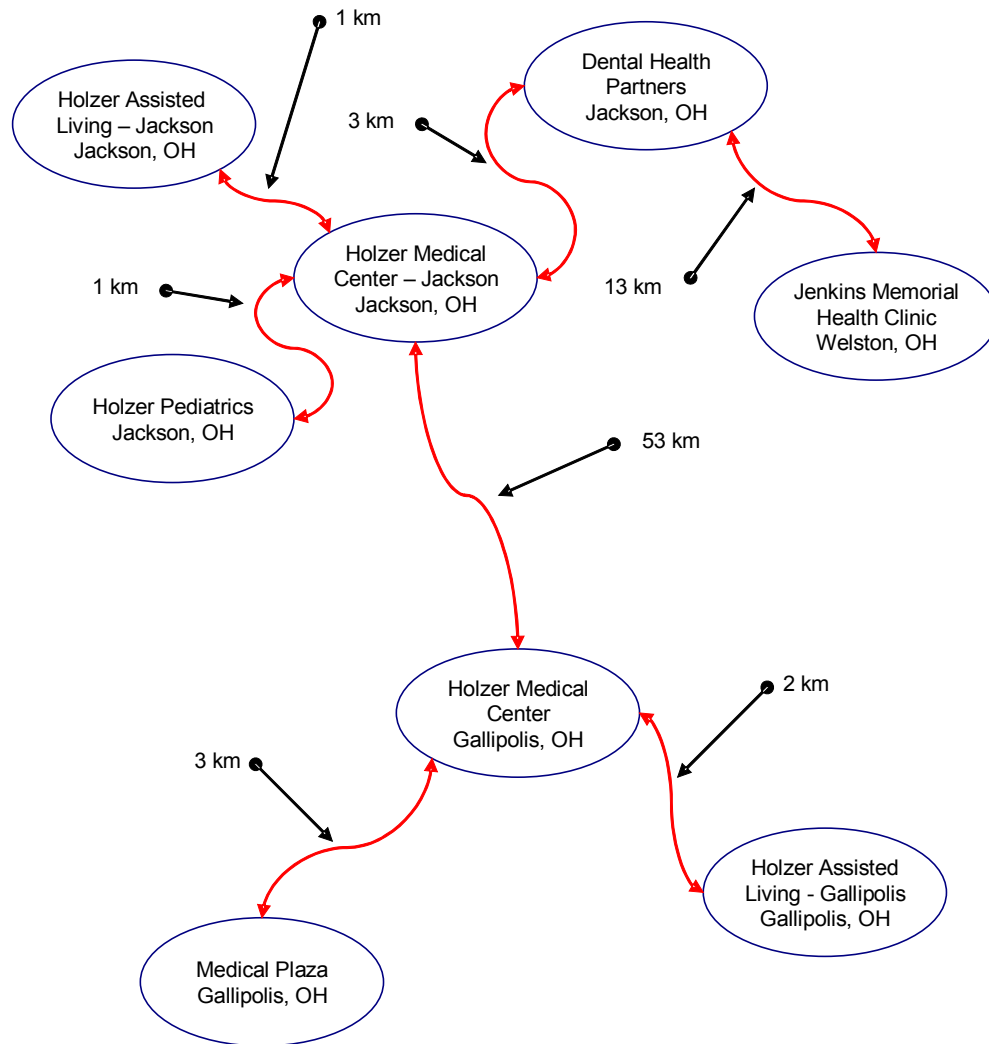
Holzer Assisted Living – Gallipolis  
300 Brierwood Drive  
Gallipolis, Ohio 45631  
Phone: 740-441-9633  
RUCA: 5.0

Holzer Assisted Living – Jackson  
101 Markham Drive  
Jackson, Ohio 45640  
Phone: 740-286-8785  
RUCA: 7.0

The following diagram details the proposed logistical connections for the wide area fiber network with approximate distances in kilometers for the optical-electrical design.



## Proposed Holzer Medical Center Wide Area Fiber Network



### **PRIOR EXPERIENCE**

The information management staff of Holzer Medical Center is currently responsible for the ongoing operation the systems current network and associated clinical infrastructure. This team has successfully provided the

support needed for the expansion of both the clinical information systems and the expanding physical structure of Holzer Consolidated Health Systems.

Major expansion of clinical information systems occurred in the mid 1990's with the implementation of the then HBOC Star® system of clinical products throughout Holzer Medical Center. As technology progressed affiliated physicians desired access to health information offsite. The Health Information Management (HIM) staff provided this support. Current expansion of clinical data systems includes wireless networks within the hospitals for barcoded bedside administration of medications and clinical documentation. All these projects have been successfully completed by the HIM staff.

The staff of the Health Information Management department has also successfully provided support for the physical expansion of Holzer Consolidated Health Systems (HCHS). In 2000 HCHS opened a new hospital in neighboring Jackson County. This required a significant expansion of network capability. Since that time the Hospital in Jackson has expanded services to an off campus Dental Health Practice, an offsite Pediatrics medical practice and connections to an offsite teleradiology provider. All expansions required additional information network capabilities. All these expansions have been successfully implemented by the Health Information Management Staff of Holzer Medical Center.

The current phase one project is an upgrade project for our current network. The intent of this project is to replace the current T1 based network with a fiber optic based wide area network. Based on the past successes of the Health Information Management Team at Holzer Medical Center this group of individuals will be tasked with this conversion process.

## **MANAGEMENT PLAN**

### **Leadership**

The Project Leadership Team:

Thomas E. Tope  
President and CEO  
Holzer Consolidated Health Systems

Kevin R. Yeager, CPA  
Chief Financial Officer  
Holzer Consolidated Health Systems

James R. Philippe  
President  
Holzer Medical Center

Doris Wilkins  
Director of Information Systems  
Holzer Medical Center

Jeff Harrison  
Director of Maintenance / Plant Operations  
Holzer Medical Center

Ross A. Matlack, FACHE  
President  
Holzer Medical Center - Jackson

Michael E. Bowman, Ph.D., R.Ph.  
Director of Performance Improvement  
Holzer Medical Center – Jackson

Katherine L. Thomas  
Practice Manager  
Holzer Medical Center - Jackson

### Work Plan

The following outlined work plan will function as a guide to the development of a final work plan once a vendor is selected for the fiber optic installation and activation.

- Receive notice of grant award
- Review requirements for grant acceptance
- Process acceptance of grant
- Review historic project proposal
- Submit project for competitive bids as required
- Review bids and select vendor(s)
- Review project with vendor(s) and update work plan and schedule
- Begin project
- Review route for fiber installation into and between facilities
- Obtain required right of ways for fiber installation
- Begin fiber installation
- Order necessary hardware for connection to facility networks
- Install network connection hardware
- Complete fiber installation
- Light fiber network for testing
- Certify fiber network for Go Live
- Incrementally transfer current data traffic to fiber network
- Complete activation of fiber network
- Certify Phase 1 of project complete

### Schedule

The following schedule is based on an anticipated requirement for competitive bidding of the project and the need to allow 8 months for project completion once construction begins.

Month 0	Request bids for fiber installation
Month 1	Award bid for fiber installation
Month 2	Prepare for installation of fiber optic connection
Month 3	Continue to prepare for fiber
Month 4	Begin fiber optic installation
Month 5	Continue fiber installation
Month 6	Continue fiber installation
Month 7	Continue fiber installation
Month 8	Continue fiber installation
Month 9	Continue fiber installation
Month 10	Continue fiber installation Begin network hardware installation
Month 11	Continue fiber installation Continue network hardware installation
Month 12	Light and test fiber optic connectivity Go live with fiber optic

### Budget

The following budget is based on estimated costs for implementation of the proposed wide area fiber optic network.

Year 1	Fiber Installation • Labor, Materials, Permits, Engineering Services	\$ 1,800,000
	Annual Pole Rental, Preventive Maintenance	\$ 80,000
	Network Hardware	\$ 200,000
Year 1	Total	\$ 2,080,000
Ongoing	Annual Pole Rental, Preventive Maintenance	\$ 80,000

### **STATE/REGIONAL COORDINATION**

This Phase 1 project provides the backbone for a much larger infrastructure project. We anticipate the need to provide some coordination of our project with the Appalachian Regional Informatics Consortium's Electronic Data Interchange (ARIC-EDI) project. To facilitate this coordination we are an active member of the ARIC-EDI project and will allow input from this group on how best to design our

network to allow future expansion and incorporation into the larger ARIC-EDI infrastructure.

**ONGOING SUSTAINMENT**

Holzer Consolidated Health Systems is committed to ongoing quality improvement and implementation and maintenance of remote disaster recovery systems. HCHS recognizes that this commitment requires ongoing financial expenditures. HCHS therefore will include the maintenance of this network as a portion of its ongoing operational budget for the life of the network.

Thank you for providing this funding opportunity.